INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We make Indiana a cleaner, healthier place to live.

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MEETING INVITATION

West Fork Whitewater Watershed Total Maximum Daily Load
Kickoff Stakeholder Meeting
Golay Community Center
1007 E. Main Street Cambridge City, IN 47327
(Near intersection of SR 1 and US 40/Main Street)
Cambridge City, Indiana
June 27, 2007 at 6:00 pm

What is this meeting about?
A Total Maximum Daily Load, or TMDL, is a calculation of the maximum amount of a pollutant that a waterbody can receive and still meet water quality standards. A TMDL is the sum of the allowable loads of a single pollutant from all contributing point and nonpoint sources. The calculation must include a margin of safety to ensure that the waterbody can be used for the purposes the State has designated. The calculation must also account for seasonal variation in water quality.

Water quality standards are set by the state of Indiana. They identify the uses for each waterbody, for example, drinking water supply, contact recreation (swimming), and aquatic life support (fishing). The Water Quality Standards also set the scientific criteria to support that use. Any waterbody that does not meet the standards for a given pollutant is considered impaired. IDEM is developing TMDLs for impaired waters to characterize further the problems causing the impairment and work towards correcting problems.

Why is IDEM holding this meeting?
The Indiana Department of Environmental Management (IDEM) is working to develop a Total Maximum Daily Load (TMDL) for the West Fork Whitewater Watershed for *E. coli*. This TMDL will address the *West Fork Whitewater River, Greens Fork, Kelly Ditch, Line Brook, Long Creek Mixed Creek, Nettle Creek, Nolands Fork, Williams Creek* and other tributaries to the West Fork Whitewater River basin in *Wayne, southern Randolph, and northern Fayette counties.* These waterbodies are impaired for *E. coli*.

What is *E. coli* and why should we care?
E. coli is the abbreviated name for a bacterium found in the Family *Enterobacteriaceae* named *Escherichia* (Genus) *coli* (Species). Bacteria are single-cell organisms that multiply by dividing to form two cells. Under ideal conditions, bacterial numbers can double every 20 minutes. *E. coli* belong to a group of bacteria termed coliforms. The presence of *E. coli* is used as an indicator of the overall sanitary quality of soil and water environments. Use of an indicator such as *E. coli*, as opposed to the actual disease causing organisms, is advantageous as the indicators generally occur at higher frequencies than the pathogens and are simpler and safer to detect. If the indicator organisms are present, pathogenic organisms may also be present. Like *E. coli*, most other disease causing microorganisms are harbored in the intestine of warm-blooded animals.

While *E. coli* can cause illness, the most common disease causing agents associated with human and/or animal fecal materials are *Salmonella* sp. (causing gastroenteritis and typhoid fever), *Shigella* sp. (causing dysentery and gastroenteritis) and *Vibro* sp. (causing gastroenteritis). Infection can be transmitted from person-to-person, through ingestion of contaminated water or food, from animal to person, or by contact with other environmental surfaces contaminated with fecal microorganisms.

Natural waters are never sterile, as they will normally contain populations of bacteria at about 10 million bacteria per mL of water. These are generally native aquatic bacteria and pose little threat to human health. Fresh water becomes contaminated through either exposure to a wastewater source or direct exposure to waste materials. The sources of contaminants can include a miss-functioning septic system, animal wastes (overflow from feedlots, animals walking in streams and ditches, runoff and leaching from manure applied to fields), wild animals (ducks and geese), discharge from treatment plants (including situations of combined city sewer overflow and direct introductions without disinfection) and discharge from waste stabilization ponds.

Because bacteria are everywhere in the environment, we are constantly exposed to them. However, we are generally not exposed to a large enough population to allow the ingested or contacted organisms to cause health problems. Our natural assemblages of skin and intestinal bacteria protect us from most invader species. Our greatest risk of exposure comes when we contact large numbers of the problem bacteria. This situation gives the invader bacteria an advantage over the resident population, as the invaders will have large enough population numbers to allow them to dislodge part of the resident population.

We only encounter large numbers of bacteria at selected locations. These locations may include restrooms, locations with animal wastes, etc. Situations where food has been unintentionally contaminated bacterial numbers can increase to a level high to cause problems. One of the most common places to encounter large numbers of bacteria is in contaminated water.

How can I help IDEM?
You can help us by attending this meeting and becoming involved in the TMDL process. At this meeting, IDEM will provide an overview of TMDLs, general information on why the West Fork Whitewater Watershed was listed for this pollutant, and how you can help us learn more about your watershed and help complete this TMDL. We have enclosed a brief questionnaire to help us identify interested persons and possible sources of information that would help us complete this TMDL. Please take a few moments to fill it out and return it to the address on the questionnaire or bring it to the kickoff meeting. More information on IDEM's TMDL Program can be found at:

http://www.in.gov/idem/programs/water/tmdl/index.html

IDEM looks forward to your input in completing this TMDL.

Sincerely,

Andrew Pelloso, Chief
NPS/TMDLs Section
Office of Water Quality

Enclosure
cc: File Copy